

## **EXHIBIT A**

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**JOINT CLAIM CONSTRUCTION CHART**

**Disputed Claim Terms, Proposed Constructions, Agreed-Upon Constructions, and Citations to Intrinsic Evidence**

The parties reserve the right to rely on any intrinsic evidence cited for a term, regardless of which party provided the same and the right to further amend these charts as necessary. The parties further reserve the right to rely on any figures, tables, examples, or any reference incorporated by reference in cited portions of the patents-in-suit or the respective file histories, even if not explicitly referred to herein. The parties further note that the '302 and '629 patents share the same specification, and thus the parties may only cite to one of these patents instead of both patents. Similarly, the '686 patent and '948 and '548 patents largely share the same specification, with the '948 and '548 patents repeating additional material from the '302 patent, and thus the parties may only cite to one of these patents instead of all patents.

**Table of Agreed-Upon Constructions**

	<b>Term/Phrase</b>	<b>Patent(s)/Claim(s)</b>	<b>Agreed Construction</b>
1	“processor”/ “process control unit”/ “information processing unit” / “processing unit”	'302 claims 2, 16-19, 22, 23, 27, 29, 30-32, 37 '686 claims 3, 7, 12, 13 '948 claims 1-5, 7 '548 claims 1, 6, 8, 9, 14, 16	“an automated device that receives input and manipulates the data according to a set of instructions to generate an output”

**Table of Disputed Claim Terms and Proposed Constructions**

	<b>Term/Phrase</b>	<b>Patent(s)/Claim(s)</b>	<b>Plaintiff's Proposed Construction</b>	<b>Plaintiff's Intrinsic Evidence</b>	<b>Defendants' Proposed Construction</b>	<b>Defendants' Intrinsic Evidence</b>
1	“gasoline”  <i>Proposed by both Plaintiff and Defendants</i>	'302 claims 1, 12, 18, 23, 27, 36, 39  '629 claims 5, 13, 17, 24, 31  '686 claims 1, 7  '948 claims 1, 7  '548 claims 1, 6, 9, 14	“various types of refined petroleum that are used as fuel”	'302 pat., abstract, 3:44-67; 4:66-5:27; 9:47-53; 12:64-13:2.  '302 pat. FH, SUN_MAG_0000001 at 171-74, 225-38  '629 pat., FH, SUN_MAG_0000316 at 378-380  '686 pat., abstract, 1:22-34; 3:15-29; 4:60-67; 10:64-11:4; 15:51-59  '686 pat. FH, SUN_MAG_0001225 at 1339-58	“a type of petroleum-based liquid”	<b>'302 patent:</b> <i>See, e.g.,</i> 1:23-28; 1:65-2:33; 4:61-5:3; 5:8-11; 5:24-27; claims 1-41. <sup>1</sup>  <b>'548 patent:</b> <i>See, e.g.,</i> 1:29-46; 1:49-2:13; 2:26-33; 2:40-49; 3:6-14; 3:18-31; 4:26-32; 4:42-52; 4:64-67; 6:20-38; 7:33-45; 10:10-54; 12:52-13:12; 14:1-28; 15:47-67; 16:9-10; 16:39-43, claims 1-16.  <b>'302 pros. history:</b> <i>See, e.g.,</i> SUN_MAG_

<sup>1</sup> Defendants reserve the right to rely on claims from any other asserted patents.

	Term/Phrase	Patent(s)/Claim(s)	Plaintiff's Proposed Construction	Plaintiff's Intrinsic Evidence	Defendants' Proposed Construction	Defendants' Intrinsic Evidence
				'948 pat. FH, SUN_MAG_ 0001518 at 1646- 61, 1965-72 '548 pat. FH, at SUN_MAG_ 0002038 at 2448- 56, 2502-09		0000001 at 173, 236.
2	“blending unit” <i>Proposed by Plaintiff</i>	'302 claims 1, 17, 36 '686 claims 1, 7	“a unit capable of receiving a calculated blend ratio from a [processing / process control] unit and adjusting the actual blend rate to achieve the calculated blend ratio”	'302 pat., Figs. 1- 5, 3:28-50, 4:51- 57, 10:16-49, 11:28-38, 11:51- 56, 12:17-52 '686 pat., 3:29- 46, 9:56-10:16, 10:33-56 '948 pat., Fig. 6, 3:32-50, 10:8-36, 10:54-11:10	“any conventional apparatus that achieves blending of two or more separate streams into one”	<b>'302 patent:</b> See, e.g., Fig. 1; Fig. 2; 3:21-23; 4:39-54; 5:28-33; 5:40-45; 7:38-48, claims 1- 41.  <b>'548 patent:</b> See, e.g., 5:36-52; 9:55-10:9; 12:19- 32, claims 1-16.
3	“vapor pressure” <i>Proposed by Defendants</i>	'302 claims 3, 13- 17, 20-22, 34, 38, 40, 41 '629 claims 6, 7, 9, 14, 15, 17, 18, 22, 24, 25, 29, 31	Plain and ordinary meaning, or alternatively, “a physical property of volatile liquids”	'302 pat., Fig. 4, 1:28-64, 5:46-65, 6:30-52, 11:4-27, 11:57-12:20; claims 33-34 '686 pat., abstract, Fig. 3,	“volatility of gasoline or butane, including as measured by Reid vapor pressure, true vapor pressure,	<b>'302 patent:</b> See, e.g., 1:29-38; 2:55-65; 3:62-67; 5:46-64; 6:33-51, claims 1-41.

	Term/Phrase	Patent(s)/Claim(s)	Plaintiff's Proposed Construction	Plaintiff's Intrinsic Evidence	Defendants' Proposed Construction	Defendants' Intrinsic Evidence
		'686 claims 1, 7-9, 12, 16 '948 claims 1-3, 7 '548 claims 4, 12		2:5-13, 3:1-11, 6:10-29, 8:58-9:3, 11:5-18, 12:25-56, 14:38-15:9 '948 pat., abstract, Fig. 3, 2:5-13, 3:3-14, 6:20-41, 9:8-20, 11:28-41, 12:50-13:15, 14:64-15:29 '948 pat. FH at SUN_MAG_0001518 at 1697-705 '548 pat., claims 4-5, 12-13	and vapor/liquid ratio"	<b>'548 patent:</b> See, e.g., Fig. 3; 2:5-13; 3:3-14; 11:36-43; 13:13-17; 15:13-38; 16:10-12; 16:44-59, claims 1-16.
4	“vapor pressure of the gasoline stream” / “gasoline vapor pressure(s)”  <i>Proposed by Defendants</i>	'302 claims 14, 16, 21, 34, 41 '629 claims 7, 15, 17, 24, 31 '686 claims 1, 5, 7	Plain and ordinary meaning, or alternatively, “a physical property of the gasoline stream’s volatility” / “gasoline’s	'302 pat., 3:28-4:12, 5:66-6:52, 6:62-8:22, 10:16-49, 11:4-39, 11:57-12:36, 12:53-63; claims 4-7, 14-16, 28, 41 '629 pat., claims 3-4, 7-8, 15, 17	“vapor pressure of the gasoline to be blended”	<b>'302 patent:</b> See, e.g., Fig. 2; Fig. 4; Abstract; 1:14-18; 1:52-64; 2:60-63; 2:66-3:2; 3:31-36; 5:46-64; 6:14-18; 6:32-51; 6:58-60; 7:15-60; 9:39-44; 10:45-48; 11:12-

	Term/Phrase	Patent(s)/Claim(s)	Plaintiff's Proposed Construction	Plaintiff's Intrinsic Evidence	Defendants' Proposed Construction	Defendants' Intrinsic Evidence
			physical property of volatility”	'686 pat., claims 1, 7-8, 16		19; 11:28-30; 12:4-16; 12:58-61, claims 1-41.  <b>'548 patent:</b> <i>See, e.g.</i> , Fig. 1; Fig. 2; Fig. 5; Fig. 6; 2:42-49; 2:56-59; 3:32-50; 4:4-25; 5:9-31; 5:43-52; 6:46-7:3; 7:58-9:9; 9:65-10:4; 10:66-11:12; 11:30-12: 32; 13:35-67; 16:1-8; 16:44-63; 17:1-9, claims 1-16.  <b>'948 pros. history:</b> <i>See, e.g.</i> , SUN_MAG_0001518 at 1654, 1656-58.
5	“vapor pressure of the butane stream” / “butane vapor pressure”	'302 claims 14, 16, 21 '629 claim 7, 17	Plain and ordinary meaning, or alternatively,	'302 pat., 3:28-4:12, 5:66-6:52, 6:62-8:22, 10:16-49, 11:4-39, 11:57-12:36,	“vapor pressure of the butane to be blended”	<b>'302 patent:</b> <i>See, e.g.</i> , Fig. 2; 3:31-36; 5:46-64; 6:14-18; 6:32-51; 6:58-60; 7:15-60; 7:58-

	Term/Phrase	Patent(s)/Claim(s)	Plaintiff's Proposed Construction	Plaintiff's Intrinsic Evidence	Defendants' Proposed Construction	Defendants' Intrinsic Evidence
	<i>Proposed by Defendants</i>		“a physical property of the butane stream’s volatility” / “butane’s physical property of volatility”	12:53-63; claims 4-7, 14-16, 28, 41 '629 pat., claims 3-4, 7-8, 15, 17 '686 pat., claims 1, 7-8, 16		60; 10:45-48; 11:7-12; 11:21-23; 11:28-30; 12:4-16, claims 1-41.  <b>'548 patent:</b> See, e.g., Fig. 1; Fig. 2; Fig. 5; Fig. 6; 5:43-52; 9:65-10:9; 13:35-47; 13:55-62; 16:1-8; 16:44-63; 17:1-9, claims 1-16.
6	“vapor pressure of the volatility modifying agent stream” / “vapor pressure of the volatility modifier stream” / “agent vapor pressure”  <i>Proposed by Defendants</i>	'629 claims 15, 24 '686 claims 1, 7, 16	Plain and ordinary meaning, or alternatively, “a physical property of the volatility modifying agent stream’s volatility” / “a physical property of the volatility modifier stream’s volatility” /	'302 pat., 3:28-4:12, 5:66-6:52, 6:62-8:22, 10:16-49, 11:4-39, 11:57-12:36, 12:53-63; claims 4-7, 14-16, 28, 41 '629 pat., claims 3-4, 7-8, 15, 17 '686 pat., claims 1, 7-8, 16	“vapor pressure of the volatility modifying agent to be blended”	 <b>'302 patent:</b> See, e.g., Fig. 2; 3:31-36; 5:46-64; 6:14-18; 6:32-51; 6:58-60; 7:15-60; 9:46-56; 10:45-48; 11:7-12; 11:21-23; 11:28-30; 12:4-16; 12:66-67, claims 1-41.  <b>'548 patent:</b> See, e.g., Fig. 1; Fig. 2; Fig. 5; Fig. 6;

	<b>Term/Phrase</b>	<b>Patent(s)/Claim(s)</b>	<b>Plaintiff's Proposed Construction</b>	<b>Plaintiff's Intrinsic Evidence</b>	<b>Defendants' Proposed Construction</b>	<b>Defendants' Intrinsic Evidence</b>
			"agent's physical property of volatility"			1:50-54; 5:43-52; 9:65-10:9; 13:35-47; 13:55-62; 16:1-8; 16:44-63; 17:1-9, claims 1-16.
7	"gasoline volatility measurement"  <i>Proposed by Defendants</i>	'302 claims 27, 33, 34	Plain and ordinary meaning, or alternatively, "a measurement of gasoline volatility"	'302 pat., 3:28-4:12, 5:66-6:52, 6:62-8:22, 10:16-49, 11:4-39, 11:57-12:36, 12:53-63; claims 4-7, 14-16, 28, 41 '629 pat., claims 3-4, 7-8, 15, 17 '686 pat., claims 1, 7-8, 16	"volatility measurement of the gasoline to be blended"	<b>'302 patent:</b> See, e.g., Fig. 2; Fig. 4; 1:14-18; 1:52-64; 2:60-63; 2:66-3:2; 3:5:46-64; 6:14-18; 6:32-51; 6:58-60; 7:15-60; 10:45-48; 11:12-19; 11:28-30; 12:4-16; 12:58-61, claims 1-41.
8	"butane volatility measurement"  <i>Proposed by Defendants</i>	'302 claim 27	Plain and ordinary meaning, or alternatively, "a measurement of butane volatility"	'302 pat., 3:28-4:12, 5:66-6:52, 6:62-8:22, 10:16-49, 11:4-39, 11:57-12:36, 12:53-63; claims 4-7, 14-16, 28, 41 '629 pat., claims 3-4, 7-8, 15, 17	"volatility measurement of the butane to be blended"	<b>'302 patent:</b> See, e.g., Fig. 2; 5:46-64; 6:14-18; 6:32-51; 6:58-60; 7:15-60; 10:45-48; 11:7-12; 11:21-23; 11:28-30; 12:4-16, claims 1-41.

	Term/Phrase	Patent(s)/Claim(s)	Plaintiff's Proposed Construction	Plaintiff's Intrinsic Evidence	Defendants' Proposed Construction	Defendants' Intrinsic Evidence
				'686 pat., claims 1, 7-8, 16		
9	“tank farm” <i>Proposed by Defendants</i>	'302 claims 1, 12, 18, 23, 36, 39	“a facility that contains a number of large storage tanks for petroleum products received from a refinery, from which petroleum tanker trucks are filled”	'302 pat., 1:13-18, 3:28-4:12, 4:50-5:45	“a facility that contains a number of large storage tanks for petroleum products, from which petroleum tanker trucks are filled”	<b>'302 patent:</b> See, e.g., Abstract; Fig.1; 1:22-25; 2:24-33; 2:35-40; 2:66-3:6; 3:14-16; 3:44-48; 4:8-12; 4:51-65; 5:13-20; 8:37-39; 9:39-44; 9:59-61, claims 1-41.
10	“optimizing” <sup>2</sup> <i>Proposed by Defendants</i>	'302 claim 18	Not limiting, but if a construction is necessary, then “more accurately forecasting”	'302 pat., Figs. 1-5, 3:28-4:12, 8:23-9:27, 9:39-57, 12:17-52 '302 pat. FH, SUN_MAG_0000001 at 171-74, 225-62	Defendants contend that this term is indefinite.	Defendants contend this term is indefinite. The patent does not provide a definition or guidance to one skilled in the art as to the meaning

<sup>2</sup> This term appears in the preamble of claim 18 of the '302 patent. Sunoco contends that this term, which is in the preamble, is not a limitation of the claim. Defendants contend that the preamble, including the term “optimizing,” is a limitation of the claim. Accordingly, the parties have agreed to brief this issue in the parties’ respective claim construction briefing.

	<b>Term/Phrase</b>	<b>Patent(s)/Claim(s)</b>	<b>Plaintiff's Proposed Construction</b>	<b>Plaintiff's Intrinsic Evidence</b>	<b>Defendants' Proposed Construction</b>	<b>Defendants' Intrinsic Evidence</b>
						of the term “optimizing.”
11	“simplifying” <sup>3</sup>  <i>Proposed by Defendants</i>	'302 claim 23	Not limiting, but if a construction is necessary, then “reducing the complexity of”	'302 pat., Figs. 1-5, 3:28-4:12, 8:23-9:27, 9:39-57, 12:17-52 '302 pat. FH, SUN_MAG_ 0000001 at 171-74, 225-62	Defendants contend that this term is indefinite.	Defendants contend this term is indefinite. The patent does not provide a definition or guidance to one skilled in the art as to the meaning of the term “simplifying.”

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<sup>3</sup> This term appears in the preamble of claim 23 of the '302 patent. Sunoco contends that this term, which is in the preamble, is not a limitation of the claim. Defendants contend that the preamble, including the term “simplifying,” is a limitation of the claim. Accordingly, the parties have agreed to brief this issue in the parties’ respective claim construction briefing.